GENERAL PSYCHOLOGY (psyc1011) FOR ALL FRESHMAN STUDENTS

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CHAPTER ONE
ESSENSE OF PSYCHOLOGY

Definition of psychology

- Derived from two Greek words '***psyche***'and '***logos***'
- Psyche refers to mind, soul or sprit while logos means study, knowledge or discourse.
- Psychology epistemologically refers to the study of the mind, soul, or sprit and it is often represented by the Greek letter **Ψ** (psi) which is read as ("sy").
- Psychologists define psychology differently based on their intentions, research findings, and background experiences

Nowadays, most of them agree on the following scientific definition of psychology.

- Psychology is the scientific study of human and animal behavior and the underlying mental process

- There are three aspects under the definition of **Ψ.**

I. Science: Ψst do not study human bhr with common sense rather they follow scientific procedures and use empirical data to study behavior and mental processes.

II. Behavior: refers to all of our outward or overt actions and reactions (talking, facial expression..). There is also covert behavior considered as mental process.

III. Mental process : refer to all the internal, covert activities of our minds, such as thinking, feeling, remembering

Goals of psychology

I. Description: involves observing the behavior and noticing everything about it. Emphasizes on answering What is happening, where does it happen, to whom does it happen, and under what circumstances does it seem to happen.

II. Explanation: Why is it happening? It is about trying to find reasons for the observed behavior. This helps in the process of forming theories (general explanation of a set of observations or facts) of behavior

III. Prediction: Once we know what happens, and why it happens, we can begin to speculate what will happen in the future.

IV. Control: How can it be changed or modified?

Historical Background and Major Perspectives in Psychology

- Psychology broke away from philosophy and physiology and emerged as a separate discipline over 125 years ago.
- It began as a science of its own in 1879 in Leipzig, Germany, with the establishment of a psychology laboratory in the University of Leipzig by Wilhelm Wundt.
- He developed technique of objective introspection to scientifically examine mental experiences.
- With such newer orientation to the study of human subjective experiences that were previously under the field of philosophy alone, psychology then begun as an independent field of study and Wilhelm Wundt as its founder or "father of modern psychology.

Early schools/perspectives of psychology

- A school of thought is a system of thinking about a certain issue, say, for example, about human behavior or mind.
- Once psychology begun to use the scientific method, it then went through successive developments in which different schools of thought emerged at different times.
- **Structuralism**:

➢ Views psychology as a study of structure **(building)** of mind. It is an expansion of Wundt‘s ideas by his student named Edward Titchener (1867-1927). He is the founder of structuralism.

➢ The goal of structuralists was to find out the **units or elements**, which make up the mind such as; **sensations, images, and feelings**. The best-known method used by them was introspection - looking inward into our consciousness.

It is a procedure aimed at analyzing the mental experience into three basic mental elements: images, feelings, and sensations. It is a detailed description about **how people perceive things in the world.**

However, Analyzing mental structure alone was found to serve little purpose in helping humans deal with the environment. Hence, a new school of thought emerged to study this functional value of human mind '**Functionalism**'.

2. Functionalism:

- views psychology as a study of function of the mind.
- The founder of this school of thought is William James (1848-1910), First American psychologist.
- It focused on **what the mind does on the functions of mental activity** and **the role of behavior in allowing people to adapt to their environment.**
- Unlike Wundt and Titchener, James focused on how the mind allows people to function in the real world

- He developed many research methods other than introspection including questionnaires, mental tests and objective descriptions of behavior.

- Generally, according to functionalists, psychological processes are adaptive. They allow humans to survive and to adapt successfully to their surroundings.

However, examining human mind in terms of its structural elements and functions were, found to be simplistic to understand the complex human being.

It was believed that human mind is more than the sum of sensations as well as adaptive functions. Hence, a new school of thought was emerged to examine mind in a holistic manner '**Gestalt Psychology**'.

3. Gestalt psychology

- ✓The leading proponents of the Gestalt view were the German psychologists Max Wertheimer, Kurt Kafka and Wolfgang Kohler I 20th century.
- ✓Instead of considering separate parts that make up thinking, Gestalt psychologists concentrated on the 'whole'.
- ✓Gestalt psychologists argued that the mind is not made up of combinations of elements. The German word "gestalt" refers to form, whole, configuration or pattern.
- ✓According to them, the mind should be thought of as a result of the whole pattern of sensory activity and the relationships and organizations within their pattern.
- ✓ They acknowledge consciousness

'THE WHOLE IS GREATER THAN THE SUM OF ITS PARTS'

Mind is greater than sensation, image & feelings

To sum up, the above three school of thoughts try to examine the human mind; which is an internal, not visible, and hidden experience of human beings.

- Although it could be useful to understand this experience, it was believed that this subjective, private experience can‘t be observable, measurable, and hence can‘t be studied scientifically.
- Therefore, psychology needs to get rid of dealing with subjectivity in all its forms and rather focus on studying behavior
- This has led to the birth of a new paradigm of thought about psychology called ‘behaviorism’.

4. Behaviorism

- John B. Watson is the founder of behaviorism
- View psychology as a study of observable and measurable behaviors. Other proponents include E. Thorndike and F. Skinner.
- For Watson, psychology was the study of observable and measurable behavior and nothing more about hidden mental processes
- Consciousness cannot be the object of scientific study
- As to Watson, behaviorism had three other important characteristics in addition to its focus on behavior;

✓ **Conditioned response** as the elements or building blocks of behavior

✓ Learned rather than unlearned behaviors and

✓ Focus on animal behavior.

BEHAVIORS ARE LEARNED NOT INHERITED AND LEARNERS ARE PASSIVE AND REACTIVE

Generally, all the above discussed schools of thought were focusing on human mind and behavior as conscious experiences.

However, an opposition to this assertion came from a physician in Vienna who, realized that human functioning was basically explained by more powerful forces which were not accessible to our consciousness

Hence, this lead to the formulation of a new school of thought in psychology called Psychoanalysis.

5. Psychoanalysis

- The Viennese neurologist and psychologist Sigmund Freud (1856-1939) pioneered the psychoanalytic perspective
- Psychology studies about the components of the unconscious part of the human mind.

- As a physician, Sigmund Freud became convinced that some of the physical illnesses of his patients didn‘t have medical or bodily causes; but non-physical or emotional causes. He called it as ‘***hysteria***’ or conversion reaction.

- Conflicts and emotional traumas that had occurred in early childhood can be too threatening to be remembered consciously and therefore they become hidden or unconscious and then will remain to affect later behavior

- Conscious awareness is the tip of the mental iceberg beneath the visible tip lays the unconscious part of the mind.

- The unconscious contains hidden wishes, passions, guilty secrets, unspeakable yearnings, and conflict between desire and duty.

- Unconscious urges and thoughts make themselves known in dreams, slip of the tongue, apparent accidents and even jokes. He used clinical case studies (hypnosis and Dream analysis) as a method.

Modern schools of psychology

1. Psychodynamic

- It has its origins in Freud's theory of psychoanalysis

It emphasizes

- The unconscious dynamics within the individual such as inner forces, conflicts or instinctual energy.
- The influence of unconscious mental behavior on everyday behavior
- The role of childhood experiences in shaping adult personality
- The role of intrapersonal conflict in determining human behavior

Psychodynamists think of themselves as '*archaeologists of the mind'*

2. Behavioral perspective

- The forerunners of this view were J.B. Watson, Ivan Pavlov, Edward L. Thorndike and B.F. Skinner
- It emphasizes the role learning experiences play in shaping the behavior of an organism.
- Behaviorists focus on environmental conditions (e.g. rewards, and punishments)
- Sometimes called the "black box" approach in psychology because it treats the mind as less useful in understanding human behavior and focus on what goes in to and out of the box.
- Behaviorists are only interested in the effects of the environment (input) on behavior (output) but not in the process inside the box

3. Humanist approach

- Human behavior is not determined either by unconscious dynamics or the environment.
- Emphasizes the uniqueness of human beings and focuses on human values and subjective experiences.
- Assumes that people are naturally endowed(gifted) with the capacity to make decisions about their lives and to control their behavior
- This perspective places greater importance on the individual‘s free will.

4. Cognitive perspectives

- Emphasizes mental processes such as perception, memory, intelligence, language, problem solving, and others
- Concerned about the mental processes
- The most important contribution of this perspective has been to show how people's thoughts and explanations affect their actions, feelings, and choices.
- Techniques used to explore behavior from a cognitive perspective include electrical recording of brain activity, electrical stimulation and radioactive tracing of metabolic activity in the nervous system

5. Biological perspective

- It states that behavior has a biological basis.
- It holds that the brain and the various brain chemicals affect psychological processes such as learning, performance, perception of reality, and the experience of emotions.
- Biology affecting behavior and behavior in turn affecting biology.
- Genetic heritage can predispose us to behaving in a certain way.

6. Socio-cultural Perspective

✓ It focuses on the social and cultural factors that affects human behavior.

Branches/Sub Fields of Psychology

Developmental Ψ:studies the physical, cognitive and psychological changes across the life span.

Personality Ψ: Focuses on the relatively enduring traits and characteristics of individuals.

Social Ψ: Deals with people's social interactions, relationships, social perception, and attitudes.

Cross-cultural Ψ: Examines the role of culture in understanding behavior, thought, and emotion.

Industrial Ψ: Applies psychological principles in industries and organizations

Health Ψ: applies psychological principles to the prevention and treatment of physical illness and diseases.

Clinical Ψ: -is a field that applies psychological principles to the prevention, diagnosis, and treatment of psychological disorders

Research Methods in Psychology

- ✓ Research is any honest attempt to study a problem systematically or to add to man's knowledge of a problem. In psychology, researchers want to see only what is there, not what their biases might want them to see. Researchers do this by using the scientific method
- ✓ Scientific method: A process of testing ideas through systematic observations, experimentations, and statistical analysis.
- ✓ Theory - is an integrated set of principles about observed facts that is intended to describe and explain some aspects of experience.
- ✓ Hypotheses - is a tentative proposition about the relationship between two or more variables or phenomena

Major types of research method

Descriptive research

- ✓ The researcher simply records what she/he has systematically observed.

It includes

- *Naturalistic observation:* subjects are observed in their natural environment to get a real (not artificial) picture of how behavior occurs. Limitations : observer effect and observer bias.
- *Case study :* A technique in which an individual is studied in great detail. Adv (in-depth study), dis adv (lack of generalization*)*
- *Survey:* Used to collect data from a very large group of people. It is useful to get information on private (covert) behaviors and it addresses hundreds of people . Its disadvantage is that it needs a careful selection of a representative sample of the actual population.

Correlational research

- Is a research method that measures the relationship between two or more variables.
- A variable is anything that can change or vary i.e, scores on a test, the temperature in a room, gender, and so on.
- It tells the strength and direction of the relationship, however, it doesn‘t prove causation (which means it doesn‘t show the cause and effect relationship).

Experimental Research

- ✓ Studies cause effect relationship between variables
- ✓ It involve at least one independent variable and one dependent variable
- ✓ The independent variable is the manipulated, influential, experimental factor.
- ✓ The dependent variable is the factor (behavior) that is measured in an experiment. It can change as the independent variable is manipulated.

- ✓ Experiments also involve randomly assigned experimental groups and control groups.
- ✓ An experimental group is a group whose experience is manipulated.
- ✓ A control group is a comparison that is treated in every way like the experimental group except for the manipulated factor.

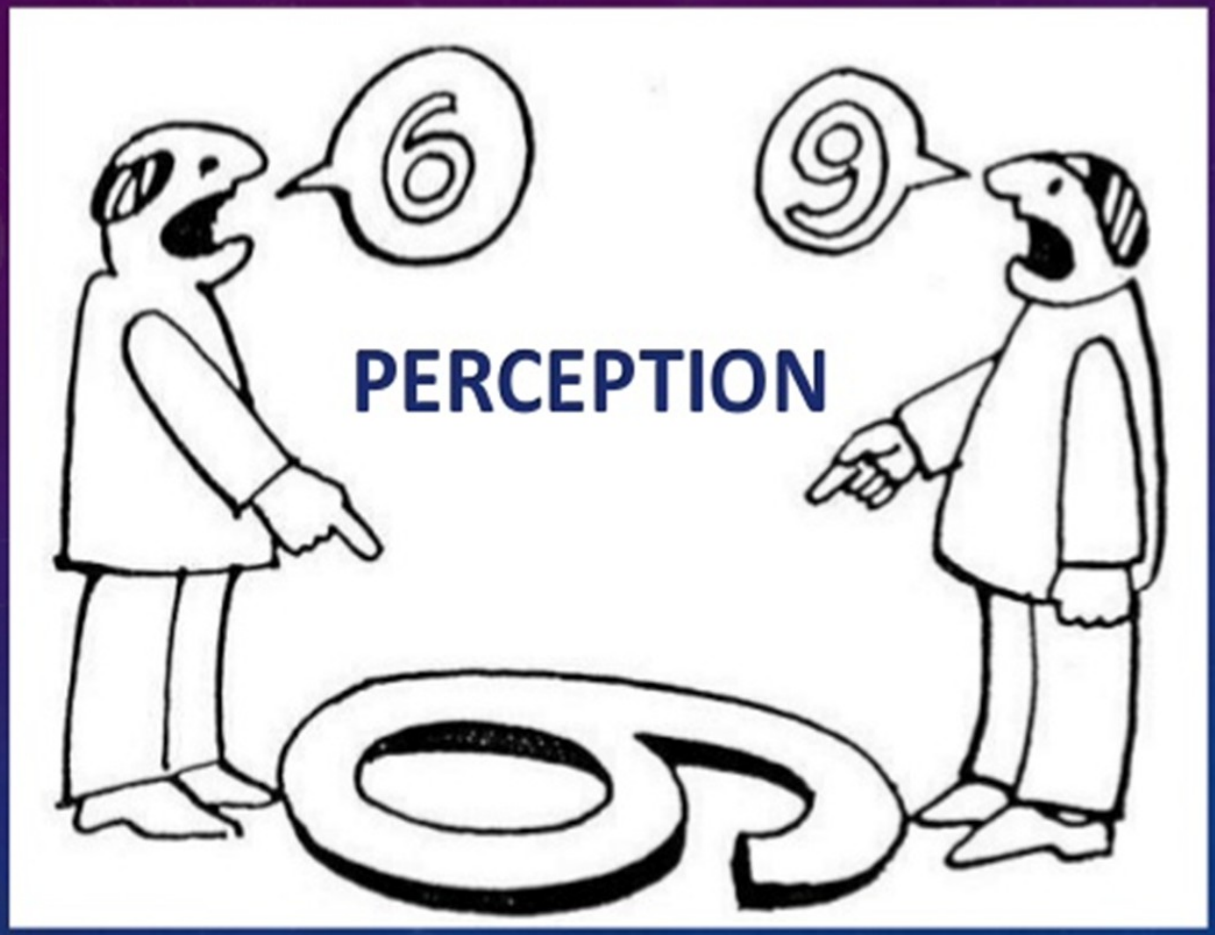
Steps of scientific research

In scientific research, there are at least five major steps to be followed.

1. Defining the problem
2. Formulating the Hypothesis (expected guess)
3. Testing the Hypothesis
4. Drawing Conclusion
5. Reporting Result

- For example, a researcher may need to know whether or not class size has an effect on students ‘academic performance and hypothesizes as —do students in small class size have better academic performance than students in large class size? In this question, the researcher has two variables: class size, which is the independent variable to be manipulated and students‟ performance which is the dependent variable to be measured while class size is changed.

- **Sensation** is the process by which an organism's sense organs respond to a stimulus.
- It is the process whereby stimulation of receptor cells in the eyes, ears, nose, mouth, and surface of the skin sends nerve impulses to the brain.
- **Perception:** It is the process whereby the brain interprets sensations, giving them information, order, and meaning
- It is the process that organizes sensations into meaningful patterns
- Thus, hearing sounds and seeing colors is *largely* a sensory process, but forming a melody and detecting patterns and shapes is *largely* a perceptual process



Perception is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their

The sensory laws: Sensory thresholds and sensory adaption.

- There are certain sensory laws that explain how sensation works.
- There are two general laws of sensation.

1. Sensory threshold is *the minimum point of intensity a sound can be detected*. There are two laws of sensory threshold: The law of absolute threshold and the law of difference threshold.

a. The absolute threshold

- The minimum amount of stimulation a person can detect.
- *for example, a cup of coffee would require a certain amount of sugar before you could detect a sweet taste.*

b. The difference threshold

- In addition to detecting the presence of a stimulus, you also detect changes in the intensity of a stimulus.
- The minimum amount of change that can be detected.
- *For example, a cup of coffee would require a*

Sensory Adaptation

- If a stimulus remains constant in intensity, you will gradually stop noticing it.
- It is the tendency of our sensory receptors to have decreasing responsiveness to unchanging stimulus.
- *For example, after diving into a swimming pool, you might shiver. Yet a few minutes later you might invite someone to join you saying, —The water is fine.*
- *On entering a friend‘s dormitory room, you might be struck by the repugnant stench of month-old garbage. Yet a few minutes later you might not notice the odor at all.*

2.3.1. Selectivity of perception: Attention

- Note that at any given time, your sense organ is bombarded by many stimuli. Yet you perceive a few of them.
- In fact you may be attending to one of such incoming in put ignoring the other noises. Such selective perception is called attention.
- **Attention** is the perceptual process that selects certain inputs for inclusion in your conscious experience, or awareness, at any given time, ignoring others.

- The selectivity of perception implies, among other things, that our field of experience is divided into what is known as —**Focus** and —**Margin**.
- Events or stimuli that you perceive clearly are the focus of your experience and other items or stimuli that you perceive dimly or vaguely are in the margin of your attention.
- To illustrate **focus** and **margin** consider that your perceptual field is a football game. While you are dimly aware of the tangle of players and the activity of the blockers during the play, it is the ball carrier and his movement that stands out clearly to you your attention is mainly focused on him.

2.3.2. Form perception

- Visual sensations, as discussed under sensation, provide the raw materials that are to be organized into meaningful patterns, shapes, forms, and concepts or ideas or form perception.
- The meaningful shapes or patterns or ideas that are made perhaps out of meaningless and discrete or pieces and bites of sensations refer to **form perception**

Figure-Ground Perception

Is the perception of objects and forms of everyday experience as standing out from a background.

- ✓ Pictures (figure) hang on a wall (ground)
- ✓ Words (figure) are seen on a page (ground)
- ✓ Melody (figure) stands out from the repetitive chords in the musical background (ground)

There can be a shift in you perception of figure and ground such that the figure may become the ground and vice versa

Contours in Form Perception

- ✓ Contours help to separate the figure from the general around in your visual perception

Organization of form perception

- When objects are present in the visual field, we tend to perceive them as organized into patterns or groupings.
- The Gestalt psychologists studied such organization
- They emphasized that organized perceptual experience has properties, which cannot be predicated from a simple analysis of the components.

"The whole is more than the sum of its parts."

Gestalt laws of perceptual organization

- ✓ Are principles that describe how we organize and construct pieces of information into meaningful wholes.
- ✓ They include: closure, proximity, similarity, and simplicity.

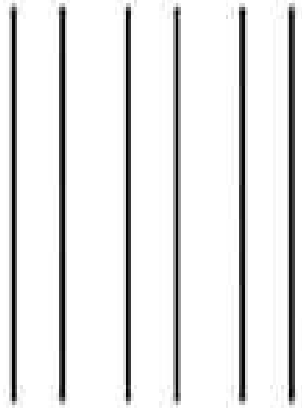
Cont'd….

i. Proximity:- or nearness. The laws of proximity says that items which are close together in space or time tend to be perceived as belonging together or forming an organized group.

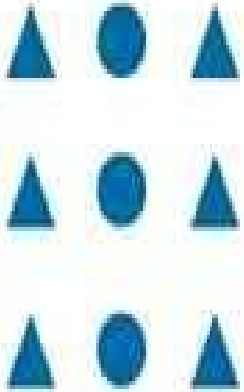
ii. similarity:- is a tendency to perceive similar or alike objects as belongs together.

iii. Continuation:- the tendency to perceive a line that starts in one way as continuing in the same way. For example, a line that starts out as a curve is seen as continuing on smoothly curved course.

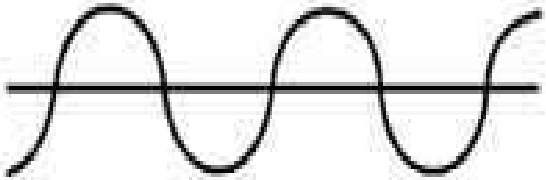
iv. law of closure:- is a tendency to perceive objects as more complete by filling the missed gaps.



Proximity

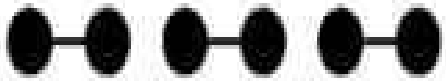


Similarity

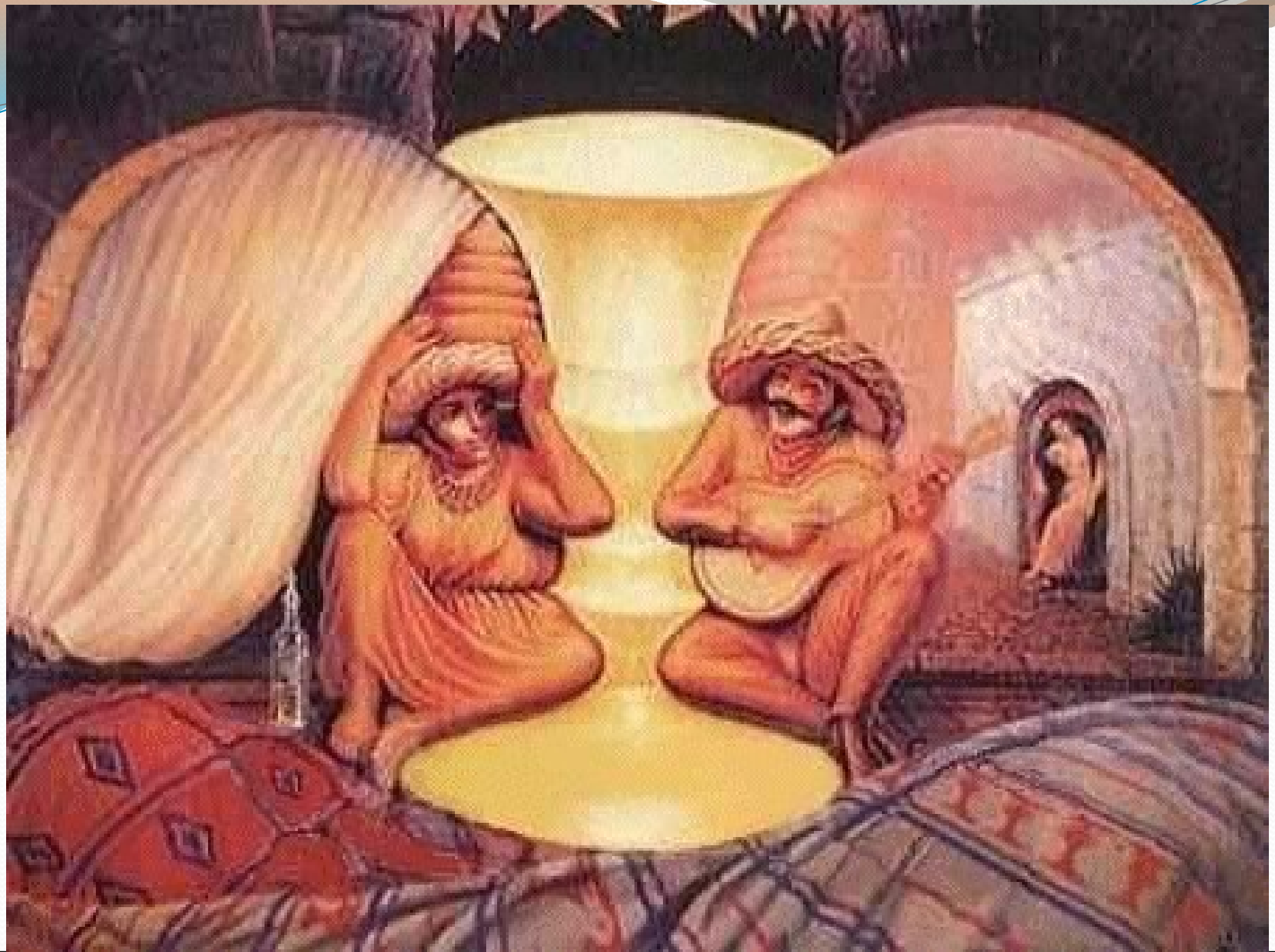


Continuity

Closure



Connectedness



C. Depth perception

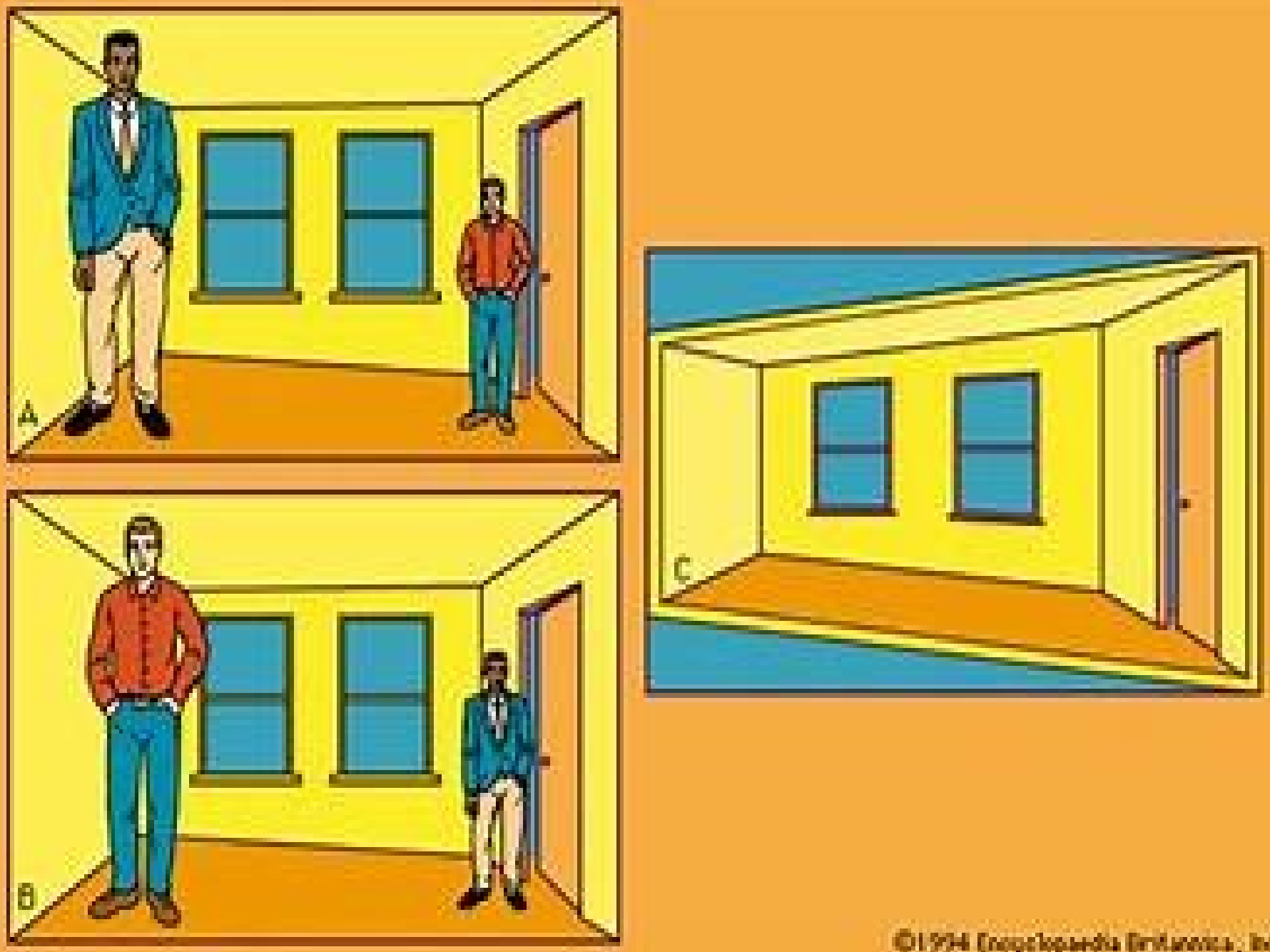
- Is the ability to judge the distance of objects.
- Distance is determined by using two different cues: binocular and monocular.

- The image of a given object focused on your retina may vary in size, shape, and brightness. Yet you will continue to perceive the object as stable in size, shape, and brightness because of perceptual constancy.

i. **Size constancy** makes you interpret a change in its retinal size as a change in its distance rather than a change in its size.

ii. Shape constancy assures that an object of known shape will appear to maintain its normal shape regardless of the angle from which you view it.

iii. Brightness constancy:- Though the amount of light reflected from a given object can vary, we perceive the object as having a constant brightness.



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Perceptual Constancy

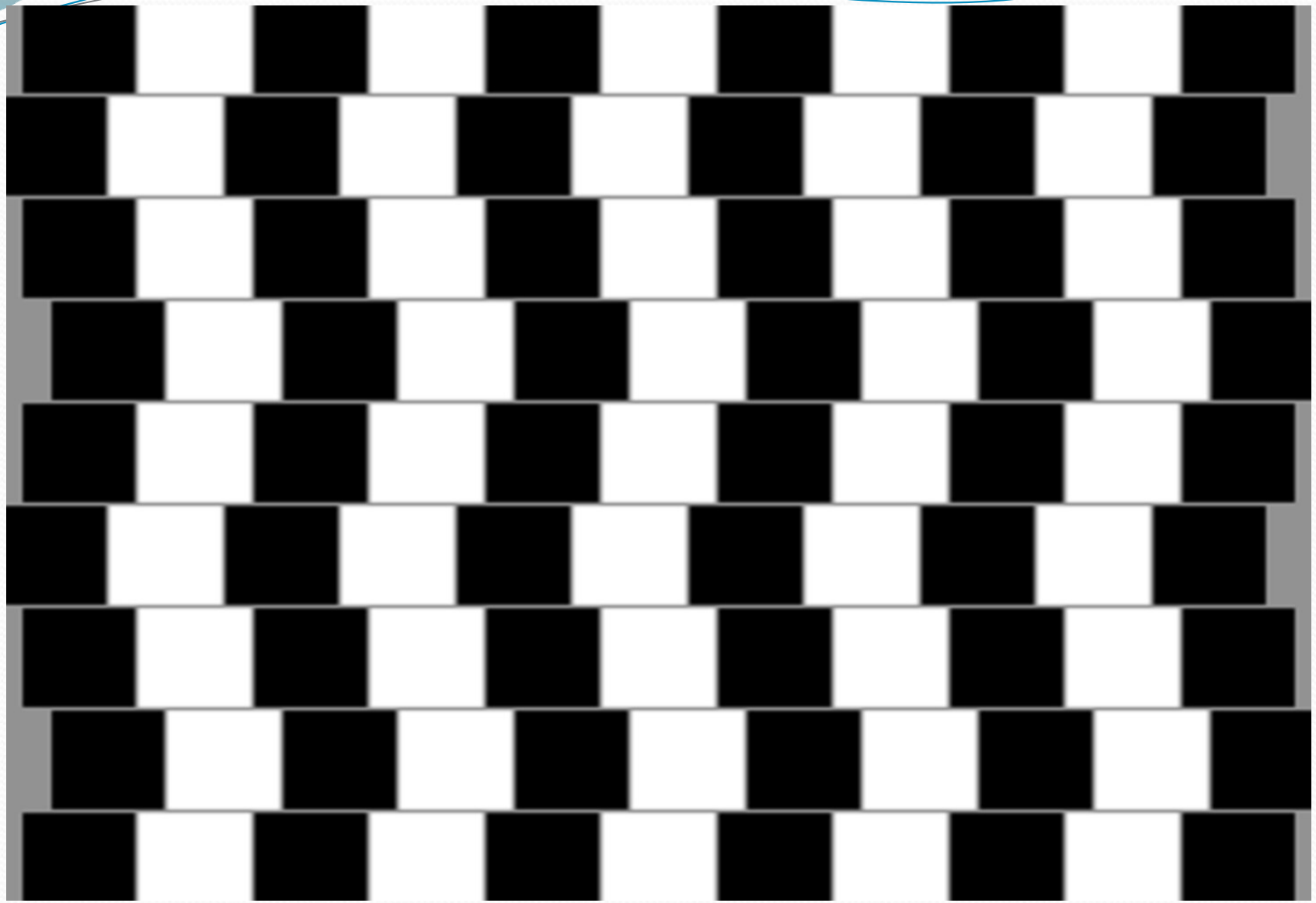
- Shape constancy - perceive objects as having a constant shape

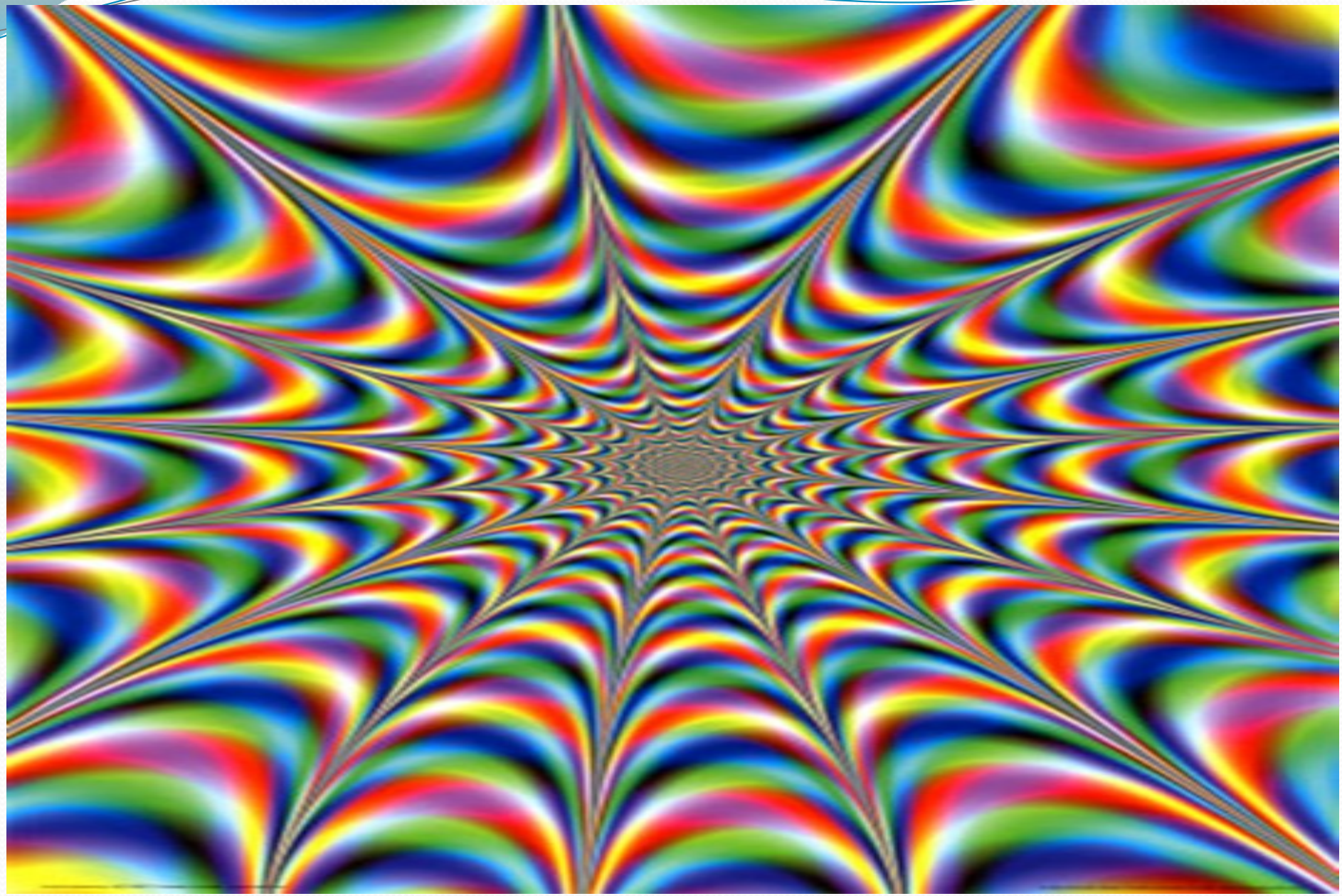
Perception Illusion and Hallucination

- **Illusion** refers to instance in which perception yields

false interpretation about the physical reality.

An **illusion** occurs when the choice is **incorrect**.





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Extrasensory Perception

- This refers to perception that occurs without a basis in sensory input. In other words it is the unique power some people have to sense something that the majority of us are not lucky (or unlucky?) to do so.
- There are psychologists known by the name 'Para psychologists' who study Para normal events – things that are out of the normal experience or knowledge. For these groups of psychologists, every one of us has a 6th sense

paranormal and extrasensory manifestations

A. Precognition: - ability to foretell future events. Some people
are believed to have the ability to tell what is going to happen after some time.

B. Clairvoyance: ability to perceive hidden objects that are not
clearly observable or perceivable to anyone. For these people you cannot hide something and lie that you do not have it.

C. Telepathy:- It refers to direct transmission of thoughts from

a. Psycho kinesis: - This refers to a unique ability to

affect the physical world purely through thoughts. People with such an extrasensory power can, for example, bend a spoon or a key without touching (without applying any physical force). There is no strong research evidence presented to support the claim that a 6^{th} sense exists. It is true that such people are observed to display such an amazing power to our

CHAPTER THREE
LEARNING AND THEORIES OF LEARNING

Learning outcomes

- Explain the general meaning, types, and factors of learning
- Identify the characteristics of learning
- Describe some of the theories designed to explain the characteristics of learning
- Differentiate the viewpoints of different theories of learning.
- Discuss the applications of theories of learning
- State techniques used to motivate and reinforce behavior

Definitions of learning

- It is a relatively permanent change in behavior occurring as a result of experience or practice.
- The above definition emphasizes four attributes of learning
  - ✓Learning is a change in behavior
  - ✓This change in behavior is relatively permanent
  - ✓It does not include change due to illness, fatigue, maturation and use of intoxicant.

- ✓ This permanent change in behavior is not because of biological factors (like hormonal changes) that bring permanent changes in behavior; but because of experience, or practice
- ✓ The learning is not directly observable but manifests in the activities of the individual.

Characteristics of learning

Yoakman and Simpson described the following ch/s of learning.

- It is continuous modification of behavior throughout life
- It is pervasive, it reaches into all aspects of human life.
- It is often a change in the organization of experiences.
- It is responsive to incentives
- It is an active process
- It depends on maturation, motivation and practice.

Principles of learning

- ✓ Individuals learn best when they are physically, mentally, and emotionally ready to learn.
- ✓ Students learn best and retain information longer when they have meaningful practice and exercise
- ✓ Learning is strengthened when accompanied by a pleasant or satisfying feeling
- ✓ Things learned first create a strong impression in the mind that is difficult to erase.

- ✓ Things most recently learned are best remembered.
- ✓ The principle of intensity implies that a student will learn more from the real thing than from a substitute.
- ✓ Individuals must have some abilities and skills that may help them to learn.
- ✓ Things freely learned are best learned

Factors influencing learning

- Motivation
- Maturation
- Health condition of the learner
- Psychological wellbeing
- Good working condition
- Experience
- Length of learning period
- Massed and distributed learning

Theories of learning

What is theory??

- An idea or set of ideas that is intended to explain facts or events
- An idea that is suggested or presented as possibly true but that is not known or proven to be true
- The general principles or ideas that relate to a particular subject

- Learning theories provide the theoretical framework to understand how people learn.
- We want to know how people acquire new knowledge, develop skills, modify attitudes,

Behaviorist theories

- One of the first developed and used theories in USA education system and continue to be universal.
- Some assumptions that have historically supported behavioral research are the follows (Ormrod, 2016)
  - Humans and animals learn in similar ways
  - Studying stimulus and response objectifies the learning process
  - Internal process, such as thoughts, motives, emotions, are un important in understanding learning because they are not observable
  - Later behaviorists stated that motivation and strength of S-R association were important
  - Learning is largely the result of environmental events that condition behavior

- Behavioral theories emphasize observable behaviors, seek laws to govern all organisms, and provide explanations which focus on consequences.
- Generally, behaviorists view learning as the product of the association between stimulus conditions **(S)** and the responses **(R).**
- It is sometimes referred as the **S-R** model of learning.
- The behaviorist, to modify people's attitudes and responses, recommends either
  - To alter the stimulus conditions in the environment or
  - To change what happens after a response occurs.

- However, behaviorists also differ among themselves with respect to their views about the role of reinforcement in learning.
- There are two major behavioral theories of learning
  1. Classical conditioning
  2. Operant conditioning

Classical conditioning

- **Classical conditioning** (Pavlovian or Respondent conditioning) is a form of conditioning and learning that was first demonstrated by **Ivan Pavlov** (1927).
- Focuses on the learning of **involuntary emotional** or physiological responses to stimuli that normally elicit no response; for **example**, **fear, increased heartbeat, salivation or sweating**
- Known as conditioned reflexes. An example of this is a knee-jerk‘reflex.

- This reflex isn‘t controlled by the brain, but by the spinal cord, and it is straight forward response to the stimulus. Another example of a reflex is the production of **saliva** in a response to food when you are hungry,
- **Classical conditioning** is a type of learning in which a neutral stimulus comes to bring about a response after it is paired with a stimulus that naturally brings about that response.

Basics of classical conditioning

Neutral stimulus(NS)

- ✓ A stimulus that, before conditioning, does not naturally bring about the response of interest.

Unconditioned stimulus (UCS)

- ✓ A stimulus that naturally brings about a particular response without having been learned.

Unconditioned response (UCR)

- ✓ A response that is natural and needs no training (e.g., salivation at the smell of food)

Conditioned stimulus (CS):

- ✓ A once neutral stimulus that has been paired with an unconditioned stimulus to bring about a response formerly caused only by the unconditioned stimulus.

Conditioned response (CR):

- ✓ A response that, after conditioning, follows a previously neutral stimulus (e.g., salivation at the ringing of a bell)

Hence, the theory of classical conditioning represents a process in which a neutral stimulus, by pairing with a natural stimulus, acquires all the characteristics of natural stimulus.

Procedures of Pavlov's Experiment

The experiment which Pavlov has conducted on Dog has three steps.

Step 1: Before Conditioning; - ringing the bell caused no response from the dog. Placing food in front of the dog initiated salivation.

NS Bell ——————— No Salivation No response

UCS Meat ——————— UCR Salivation

Step 2: During Conditioning (Repeatedly)

NS Bell + UCS Meat ——————— UCR Salivation

Step 3: After Conditioning

CS Bell ——————— CR Salivation

Pavlov (1927), ***The process of classical conditioning model of learning.***

Before conditioning

FOOD (UCS) **SALIVATION (UCR)**

BELL **NO RESPONSE**

During conditioning

BELL + FOOD (UCS) **SALIVATION (UCR)**

After conditioning

BELL (CS) **SALIVATION (CR)**

Principles of classical conditioning

1. Stimulus generalization

- ✓ In classical conditioning, generalization is defined as the process in which a stimulus similar to the original CS produces similar behavior identical to the CR

Ex. 2+3= 5 and 2*3=5

2. Stimulus discriminations

- The opposite process to generalization is discrimination.
- With more diverse experiences individuals learn to differentiate among similar stimuli.

If two different tones were sounded but food was presented with only one of them, the dog would learn to salivate discriminately.

Ex. 2+3= 5 and 2*3=6

3. Extinction

- ✓ Not permanent, diminish and eventually stop occurring.

4. Spontaneous recovery.

- ✓ It is the reemergence of an extinguished conditioned response after a period of rest and with no further conditioning.

Operant/Instrumental conditioning

- It is learning in which a voluntary response is strengthened or weakened, depending on its favorable or unfavorable consequences.
- It is a deliberate form of learning in which the organism actively attempts to change its environment to produce a desirable outcome.
- An emphasis ***on environmental consequences*** is at the heart of Operant Conditioning
- The term operant emphasizes this point: The organism operates on its environment to produce a desirable result.
- Besides, **B.F Skinner**, the very renowned proponent of operant conditioning, argued that to understand behavior we should focus on the external causes of an action and the action's consequences.
- To explain behavior, he said, we should look outside the individual, not inside.

A reinforcement : that strengthens the response or makes it more likely to recur.

- ✓ **A reinforcer** is any event that increases the probability of the behavior that precedes it will be repeated.
- ✓ There are two basic types of rein forcers or reinforcing stimuli: primary and secondary reinforcers.

Primary reinforcers

- That satisfies some biological need. It is not based on past experience or learning.eg
- Food, water, light, stroking of the skin, and a comfortable air temperature are naturally reinforcing because they satisfy biological needs.

Secondary reinforcers

- ✓ Are the stimulus that becomes a reinforcer because of their association with a primary rein forcer.
- ✓ Money, praise, applause, good grades, awards, and gold stars are common secondary reinforcers.
- ✓ Behaviors can be controlled by secondary reinforcers.

Both primary and secondary reinforcers can be positive or negative.

1.Positive reinforcement: It is a stimulus when added to the environment brings about an increase to the preceding response.

- ✓ It is the process whereby presentation of a stimulus makes behavior more likely to occur again.

2. Negative reinforcement: It is the process whereby termination of an aversive stimulus

Negative rein forcers work in two forms;

A. Escape conditioning: the learner makes a response to bring about an end to an aversive situation.

For example, if someone nags you all the time to study, but stops nagging when you comply, your studying is likely to increase- because you will then avoid the nagging.

Example. A college student takes a day to escape from a workload.

B. **Avoidance conditioning:** when the learner responds to a signal that marks the coming (onset) of unpleasant event with the aim of avoiding the evasion. Or refers to learning to avoid a painful, noxious stimulus prior to exposure.

Example:. The pretension of some people to look ill in order to escape from doing something that they do not want to do.

Schedules of reinforcements

- The two main schedules are **continuous reinforcement** and **partial/ intermittent reinforcement**.
- When a response is first acquired, learning is usually most rapid if the response is reinforced each time it occurs. This procedure is called **continuous reinforcement**
- However, once a response has become reliable, it will be more resistant to extinction if it is rewarded on an intermittent (partial) schedule of reinforcement
- Intermittent reinforcement: involves reinforcing only some responses, not all of them

There are four types of intermittent schedules

1. Fixed-ratio schedules:(Response/action based)

- ✓ Reinforcement occurs after a fixed number of responses.
- ✓ They produce high rate of responding.
- ✓ Employers often use fixed ratio schedules to increase productivity

2. Variable-Ratio Schedule:

- ✓ Reinforcement occurs after some average number of responses, but the number varies from reinforcement to reinforcement.
- ✓ A variable ratio schedule produces extremely high steady rates of responding.
- ✓ The responses are more resistant to extinction than when a fixed ratio schedule is used. **Gambling**

3. **Fixed Interval Schedule:(Time based schedules)**

- ✓ A fixed interval schedule of reinforcement occurs only if a fixed amount of time has passed since the previous rein forcer. Employee salary (30 days)
- ✓ In Every weekend the teacher will reward a student with 100 birr

4. **Variable Interval Schedule:**

- ✓ A variable interval schedule of reinforcement occurs only if a variable amount of time has passed since the previous rein forcer**. 5th day, 10th day, 20th day 30th day**

Punishment

- ✓ It is a stimulus that weakens the response or makes it less likely to recur.
- ✓ Refers to unpleasant stimulus that decreases the probability of the occurrence of a preceding behavior.
- ✓ It often is the quickest way to change behavior.
- ✓ Like reinforcers, punishers can also be primary or secondary.

- ✓ Pain and extreme heat or cold are inherently punishing and are therefore known as **primary punishers.**
- ✓ Criticism, demerits, catcalls, scolding, fines, and bad grades are common **secondary punishers**.

The positive-negative distinction can also be applied to punishment.

- ❖ Something unpleasant may occur following some behavior (positive punishment).
- ❖ Something pleasant may be removed (negative punishment).

Table 5.3 Four Ways to Modify Behavior

	Reinforcement	Punishment
POSITIVE (Adding)	Something valued or desirable; *Positive Reinforcement* Example: getting a gold star for good behavior in school	Something unpleasant; *Punishment by Application* Example: getting a spanking for disobeying
NEGATIVE (Removing/ Avoiding)	Something unpleasant; *Negative Reinforcement* Example: avoiding a ticket by stopping at a red light	Something valued or desirable; *Punishment by Removal* Example: losing a privilege such as going out with friends

The Pros and Cons of Punishment

- Immediacy, consistency and intensity matter are important for effectiveness of punishment.
- **Immediacy** – When punishment follows immediately after the behavior to be punished.
- **Consistency**- when punishment is inconsistent the behavior being punished is intermittently reinforced and therefore becomes resistant to extinction.
- **Intensity**- In general terms severe punishments are more effective than mild ones. However, there are studies that indicate that even less intense punishments are effective provided that they are applied immediately and consistently.

- Immediacy, consistency and intensity matter are important for effectiveness of punishment.

However, when punishment fails:

- ✓ People often administer punishment inappropriately or mindlessly.
- ✓ The recipient of punishment often responds with anxiety, fear or rage.
- ✓ The effectiveness of punishment is often temporary, depending heavily on the presence of the punishing person or circumstances
- ✓ Most behavior is hard to punish immediately.
- ✓ Punishment conveys little information. An action intended to punish may instead be reinforcing because it brings attention.

Shaping:

- ✓ It is the process of teaching behavior by rewarding closer and closer approximation of the desired behavior.
- ✓ In shaping, the behavior that is similar to the expected behavior is reinforced first.
- ✓ Therefore, we use reinforcement selectively to convert simple behaviors into more complex patterns of responding.
- ✓ The process is sometimes called ***successive approximation***.

Application of the theory of operant conditioning:

- Conditioning study behavior
- Conditioning and classroom behavior
- Managing Problem Behavior
- Dealing with anxieties through conditioning
- Conditioning group behavior
- Conditioning and Cognitive Processes
- Shaping Complex Behavior

Social Learning Theory (observational learning) theory

- The founder of the theory was Albert Bandura.
- The theory claims that a major part of human learning takes place through observing the behavior of another person called a model.
- Because of its reliance on observation it is often referred as a *social* cognitive approach to learning
- Bandura identifies three forms of reinforcement that can encourage observational learning.
  - ✓ Direct reinforcement
  - ✓ Vicarious reinforcement

- First, of course, the observer may reproduce the behaviors of the model and receive *direct reinforcement.* The reinforcement need not be direct - it may be *vicarious reinforcement* as well. As mentioned earlier, the observer may simply see others reinforced for a particular behavior and then increase his or her production of that behavior. The final form of reinforcement is *self-reinforcement,* or controlling your reinforcers. This sort of reinforcement is important for both students and teachers. We want our students to improve not because it leads to external rewards but because the students value and enjoy their growing competence.

Bandura mentions four conditions that are necessary before an individual can successfully model the behavior of someone else:

1. **Attention**
   - ✓ The person must first pay attention to the model.
2. **Retention**
   - ✓ The observer must be able to remember the behavior that has been observed.
3. **Motor reproduction**
   - ✓ It is the ability to replicate the behavior that the model has just demonstrated.
4. **Motivation**
   - ✓ Learners must want to demonstrate what they have learned.

Educational Implications of Social Learning Theory

- Students often learn a great deal simply by observing other people.
- Modeling provides an alternative to shaping for teaching new behaviors.
- Teachers and parents must model appropriate behaviors and take care that they do not model inappropriate behaviors
- Teachers should expose students to a variety of other models.

Cognitive learning theory

- Both classical and operant conditionings have traditionally been explained by the principle of contiguity
- Contiguity has been used to explain;
  - ✓ The association of a conditioned stimulus and unconditioned stimulus in classical conditioning and
  - ✓ The association of a behavior and its consequences in operant conditioning.

- This theory agreed with behaviorists that human beings, along with the rat and the rabbit, are subject to the laws of operant and classical conditioning.
- But, they opposed that human beings, unlike the rat and the rabbit, are full of;
  - Attitudes
  - Beliefs and
  - Expectations

that affect the way they acquire information, make decisions, reason, and solve problems.

- These mental processes affect what individuals will do at any given moment

Cognitive learning may take two forms:

1. Latent learning

‘Latent’ means **hidden** and thus latent learning is learning that occurs but is not evident in behavior until later, when conditions for its appearance are favorable. It is said to occur without reinforcement of particular responses and seems to involve changes in the way information is processed.

Recall of mobile number 09……..

- **Insight Learning**

It is cognitive process whereby we reorganize our perception of a problem. It doesn't depend on conditioning of particular behaviors for its occurrence. Sometimes, **for example**, people even wake from sleep with the solution to a problem that they had not been able to solve during the day.

- In a typical insight situation a problem is posed, a period follows during where no apparent progress is made, and then the solution comes suddenly. What has been learned in insight learning can also be applied easily to other similar situations.
- Human beings who solve a problem insightfully usually experience a good feeling called an 'aha' experience.

Thank you!!